

ABSTRACT OF THE DISCLOSURE

A superconducting filter apparatus having a refrigerator for cooling the superconducting filter to cryogenic temperatures, a pilot signal generator for generating a pilot signal that is outside the pass band and inputting the pilot signal to the superconducting filter together with an antenna receive signal, and a discriminating unit for discriminating abnormality in the refrigerator. If the refrigerator malfunctions and temperature of the superconducting filter rises, the pass band of the superconducting filter shifts to the low-frequency side and crosses the frequency of the pilot signal. The pilot signal passes through the superconducting filter at this time. The discriminating unit discriminates abnormality in the refrigerator based upon the pilot signal contained in the output of the superconducting filter.